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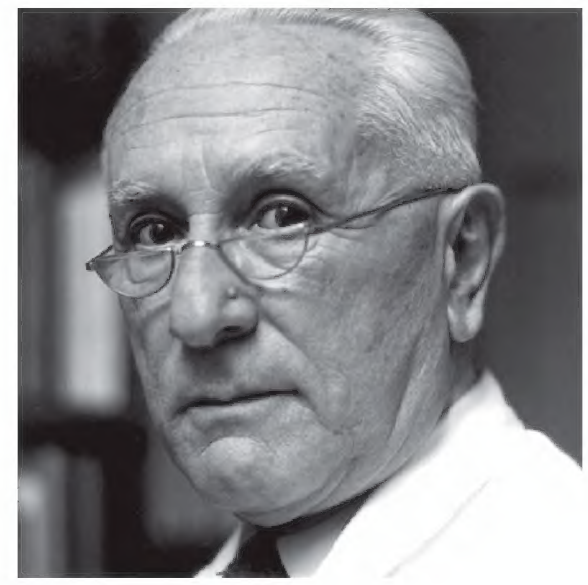

Sandro RUFFO

Remind of a master

August 26, 1915 – May 7, 2010

On the 7th of May 2010, at age 94, Sandro Ruffo passed away.

He was born the 26th of August 1915 in Soave, near Verona, and he soon developed an interest for Nature and the passion for caves.

It would take too long to list the studies he conducted, and the prizes and the academic awards he was bestowed, which in his long life made him one of the preeminent Italian zoologists, the only Museum curator belonging to the "Accademia dei Lincei", and one of the most important amphipodologists in the world. He was professor of Zoology at Modena University, the director of the Natural History Museum of Verona, and was also presented with a Degree Honoris Causa in Conservation and Management of Natural Resources in 2007. However, we think this journal is the appropriate place to mention the Ruffo's important contribution to speleology and in particular to biospeleology.

Already during his high school years, Sandro started exploring the caves of Lessini Mountains, which border Verona to the Northeast. In 1929, at age 14, he visited for the first time the Natural History Museum of Verona to find out the name of an insect he collected along the Adige River: he probably could not have imagined then, that the museum would have become his second home. In those years two other young researchers were also frequent visitors of the Museum: Francesco Zorzi, attracted by prehistory, and Angelo Pasa, interested in geology and paleontology. Even if the three young researchers had different backgrounds and different scientific interest, the passion for the study of caves brought them together, and they explored numerous caves in the Veronese area. Their enthusiasm in research is shown by their first publication, co-authored by all three, where they described a series of research conducted in Grotta Damati (9 V/VR) near Verona, which lead Ruffo to notice the importance of biospeleology and of how "the zoological research should be integrated by records of temperature and water level, in order to characterize the physical environment of each cave". In the same year, the 19-year old Sandro Ruffo published a paper on the presence of a leech in the "Grotta A del Ponte di Veja" (117 V/VR) on Lessini Mountains and two years later he published two papers on subterranean amphipods of the genus *Niphargus*.

All data collected in those first years of research of Lessinian caves were gathered in a paper published in 1983 and titled: "Studio sulla fauna cavernicola della regione veronese (i.e., A study of cave fauna of Veronese area)". In the same year he graduated in Agricultural Sciences at the University of Bologna, and his paper was published in the "Bollettino dell'Istituto di Entomologia della Regia Università di Bologna".

In the war years Ruffo, who was drafted in 1939, was taken prisoner by the Germans in 1943 in France, and sent to prison camps first in Poland and than in Germany. In 1945 he returned to Verona and resumed his speleological and scientific activity, at the same time working for the reconstruction of the Museum, where he had officially assumed the position of zoological curator. In the first post-war years, his renewed enthusiasms for the scientific exploration of caves lead him to create the "Gruppo Grotte A. Massalongo" with headquarters at the Museum.

Between 1948 and 1959, he and Angelo Pasa organized five research campaigns in the Apulian caves and explored and mapped, among other caves, the famous Zinzulusa Cave. These research were summarized in Ruffo's publication "Le attuali conoscenze sulla fauna cavernicola della Regione Pugliese (i.e., Present knowledge on the cave fauna of Apulia)". This paper is still often cited not only because it is one of the first publications on the

Zorzi, Ruffo and Pasa at the entrance of the Damati Cave in 1933 (photo: archive of the Museo Civico di Storia Naturale di Verona)

Italian cave fauna, and the first one for Apulia, but also because it provided an innovative ecological classification of cave animals which is still largely used.

In June 1950 Ruffo is one of the organizers of the national meeting where, in the conference room of the Natural History Museum of Verona, the Italian Speleological Society (Società Speleologica Italiana) was born (or reborn, according to someone). The celebrations for the 25th and the 50th anniversary of the society were held in the same Museum; Ruffo was present to both, to give to the old and new speleologists his greetings and wishes that speleology would continue to arouse enthusiasm in new generations of explorers. He was supposed to do the same for the 60th anniversary, last June, but he left us before then.

In the '50s Sandro's scientific activity increased, and he also took part to cave explorations: in 1950 together with Pasa, Broglio, Allegranzi and Bartolomei, he explored the first 5 km of the "Buso della Rana". This cave was later on further surveyed for a total of 27 km length; it is the longest Italian cave with only one entrance.

In 1953 Ruffo and other Italian speleologist attended the First International Spelological Conference in Paris. There, Auguste Vandel, at the time director of the Subterranean Laboratory of Moulis (France) and co-organizer of the Conference, unexpectedly asked to Sandro to open the conference with a lecture on the distribution of cave amphipods, the small, unpigmented subterranean crustaceans that Sandro studied through all his life, passing his enthusiasm and passion to dozens of young researchers from all over the world.

In 1964 he became the director of the Natural History Museum of Verona, which turned into the meeting point for biospeleologists form different countries. In 1969 he founded an international working group for the study of cave amphipods and, in the same year, he organized the first meeting on the amphipods of the genus *Niphargus*. In 1978, Ruffo organizes the XXII National Conference of the Italian Biogeographical Society dedicated to the "Biogeografia delle Caverne Italiane (i.e., the biogeography of Italian caves)", which was, and still is, a milestone for the Italian biospeleology. In 1976 the Museum became the repository of the cadaster of the caves of Verona province, and started to host the Unione Speleologica Veronese (Veronese Speleological Union).

At the end of the '70s Ruffo contributed to the creation and development of the Société Internationale de Biospéologie (now International Society for Subterranean Biology), of which he was an Honor Member.

Sandro Ruffo left something else than his academic awards, the more than 300 scientific publications (listed in a subsequent and more complete paper), the description of 190 new species, 35 genera and 1 family: he left his teaching. He was the mentor of numerous Italian and foreign scientists; he was not only a teacher of science, but also a teacher of life. His kind-heartedness, warmth and willingness to help, and his joy of living, togehter with his great scientific knowledge, have taught to many

Sandro Ruffo drawings new species of amphipods

of us the love for life and the joy and importance of exploring caves and studying small creatures which are invisible to many.

Sandro Ruffo was fascinated by all aspects of Nature, and he loved caves and the small creatures living there. He taught us the importance of the astonishment that generate the curiosity in front of all the aspect of nature, and, as he said: "curiosity is the mother of the knowledge".

Ciao Sandro, thank you.

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Museo Civico di Storia Naturale di Verona